

INTERNATIONAL SEARCH REPORT

International Application No

PCT/FR2004/002602

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C07K14/805 C12R1/85 C12P19/34

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K C12N C12R C07H

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, BIOSIS, CHEM ABS Data, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>KREBS A. ET AL: "molecular shape, dissociation, and oxygen binding of the dodecamer subunit of <i>lumbricus terrestris</i> hemoglobin" <i>JOURNAL OF BIOLOGICAL CHEMISTRY</i>, vol. 271, no. 31, 1996, pages 18695-18704, XP002272714 abstract experimental procedures</p> <p>-----</p> <p>-/-</p>	1-3

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority, claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

23 February 2005

15.03.2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Keller, Y

INTERNATIONAL SEARCH REPORT

International Application No PCT/FR2004/002602

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PAWAN K. ET AL: "the role of the dodecamer subunit in the dissociation and reassembly of the hexagonal bilayer structure of <i>lumbricus terrestris</i> hemoglobin" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 271, no. 15, 1996, pages 8754-8762, XP002272715 abstract page 8754, column 2, paragraph 1 page 8755, column 2, paragraph 1 - paragraph 2 -----	1-3
X	FUSHITANI K. ET AL.: "the extracellular hemoglobin of the earthworm <i>lumbricus terrestris</i> " JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 266, no. 16, 1991, pages 10275-10281, XP002272716 abstract -----	1-3
X	WO 01/92320 A (TOULMOND ANDRE ;ZAL FRANCK (FR); CENTRE NAT RECH SCIENT (FR); LALL) 6 December 2001 (2001-12-06) abstract example TOUS -----	1-24
X	SGOUROS J. ET AL: "Invertebrate oxygen carriers" 1986, SPRINGER VERLAG , BERLIN-HEIDELBERG , XP009026675 the whole document -----	1-24
A	ZAL ET AL: "Quaternary structure of the extracellular hemoglobin of the lugworm <i>Arenicola marina</i> . A multi-angle-laser-light-scattering and electrospray-ionization-mass-spectrometry analysis" CHEMABS, 1997, XP002165190 -----	
X	PIONETTI J.M. ET AL.: "molecular architecture of annelid erythrocruorins" EUR. J. BIOCHEM, vol. 105, 1980, pages 131-138, XP009026718 abstract experimental methods -----	1-24

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/FR2004/002602

Patent document cited in search report	Publication date		Patent family member(s)	Publication date
WO 0192320	A	06-12-2001	FR 2809624 A1	07-12-2001
			AT 272071 T	15-08-2004
			AU 6243601 A	11-12-2001
			DE 60104542 D1	02-09-2004
			EP 1284994 A2	26-02-2003
			WO 0192320 A2	06-12-2001
			JP 2004501118 T	15-01-2004
			US 2003181358 A1	25-09-2003